

What is claimed is:

1 1. An apparatus for detecting an external optical
2 disk drive's open/closed status, comprising:
3 an upper housing;
4 a cover, disposed above the upper housing, wherein a
5 convex portion is disposed at the front edge of
6 cover with a hook hole therein;
7 a solenoid valve sub-assembly, fixed under the
8 bottom face of the upper housing;
9 a solenoid valve base, comprising a body, a
10 connection part disposed on a side of the body,
11 and a spring support disposed on the other side
12 of the body, wherein a space is located between
13 the connection part and the spring support;
14 a solenoid valve, fixed at the bottom of the
15 solenoid valve base;
16 a hook device, engaged with the connection part of
17 the solenoid valve base;
18 a torsion spring, disposed at the spring support of
19 the solenoid valve base;
20 an elastic plate, disposed within the space of the
21 solenoid valve base;
22 a lower housing, with a motherboard disposed
23 thereon, combined in assembly with the upper
24 housing, to contain and protect the motherboard
25 and the solenoid sub-assembly therein; and
26 two wires, wherein one end of each wire is connected
27 to the torsion spring and the elastic plate

28 respectively, and the other end is electrically
29 connected to the motherboard;
30 wherein, when the cover is closed, the convex
31 portion located at the front edge of the cover
32 presses on the torsion spring, and the torsion
33 spring contacts the elastic plate, resulting in
34 an electrically conductive state; when the
35 cover is opened, the torsion spring is
36 released, and the torsion spring disengages
37 from the elastic plate, disconnecting the
38 circuit.

1 2. The apparatus for detecting an external optical
2 disk drive's open/closed status of claim 1, further
3 comprising a hinge, disposed at the back edge of the
4 upper housing.

1 3. The apparatus for detecting an external optical
2 disk drive's open/closed status of claim 2, wherein the
3 cover pivots on the hinge of the upper housing to open
4 and close.

1 4. The apparatus for detecting an external optical
2 disk drive's open/closed status of claim 1, wherein the
3 solenoid valve further comprises a retractable shaft.

5 5. The apparatus for detecting an external optical
6 disk drive's open/closed status of claim 4, wherein the
7 hook device includes a shaft, a leg, and a hook, and the
8 shaft is hinged at the connection part of the solenoid
9 valve base, and the leg is engaged with the retractable
10 shaft of the solenoid valve.